## REMARKS/ARGUMENTS

Amendments were made to the specification to include application serial numbers of referred-to applications and to correct typographical errors. No new matter has been added by any of the amendments to the specification.

Claims 1-24 are pending in the present application. Claim 6 is canceled. Claims 1-5, 7-21, and 23 are amended. Support for the amendments is found in the claims as filed and on page 43 of the specification. Reconsideration of the claims is respectfully requested.

### I. Objection to Specification

The Examiner objected to the specification for informalities identified on page 1 of the specification. In response, the paragraph has been amended to overcome this objection.

### II. Objection to Drawings

The Examiner objected to Figure 4 for item 401 not being referenced in the specification. In response, the specification has been amended to overcome this objection.

### III. Objection to Claims: Claims 3, 7, 11-15, and 18-24

The Examiner stated that claims 3, 7, 11-15, and 18-24 were objected to for having informalities as noted below.

With regard to item 1 and claim 3, the Examiner states:

> (1) Claim 3, line 3, "**extrema**" should be changed to "**extremes**", and the same informality in claim 14, line 3 and claim 17, line 3.

Office Action dated February 16, 2007, p. 3.

Applicants respectfully traverse this objection. The word "extrema" is defined as follows:

> **Extremum** – *noun*; *plural* **-ma**
> a maximum or a minimum of a mathematical function —called also *extreme value*

Merriam Webster Online Dictionary
http://209.161.33.50/dictionary/extremum

Additionally, "extrema" are mentioned several times throughout the specification providing sufficient support for the term. Therefore, the original term in the claims is correct and the Applicants respectfully decline the Examiner's suggestion.

With regard to claim 7, the Examiner states:

> (2) Claim 7, line 4, "**a** start point" should be changed to "**the** start point", and "**an** end point" should be changed to "**the** end point"

Office Action dated February 16, 2007, p. 3.

The Examiner's suggestion has not been adopted. The Applicants have amended the claim to overcome the objection.

With regard to item 3 and claim 11, the Examiner states:

> (3) Claim 11, line 3, "**a** start point" should be changed to "**the** start point", and "**an** end point" should be changed to "**the** end point"

Office Action dated February 16, 2007, p. 3.

The Examiner's suggestion has not been adopted. The Applicants have amended claims 8 and 11 overcoming the Examiner's objection.

With regard to item 4 and claim 12, the Examiner states:

> (4) Claim 12, line 2, "**a** stroke" should be changed to "**the** stroke"

Office Action dated February 16, 2007, p. 3.

The Examiner's suggestion has not been adopted. The Applicants have amended claims 12, thus overcoming the Examiner's objection.

With regard to item 5 and claim 18, the Examiner states:

> (5) Claim 18, line 2, "**a** start point" should be changed to "**the** start point", and on line 3, "**an** end point" should be changed to "**the** end point"

Office Action dated February 16, 2007, p. 3.

The Examiner's suggestion has not been adopted. The Applicants have amended claims 18, thus overcoming the Examiner's objection.

With regard to item 6 and claim 20, the Examiner states:

> (6) Claim 20, line 4, "**a** stroke" should be changed to "**the** stroke"

Office Action dated February 16, 2007, p. 3.

The Examiner's suggestion has not been adopted. The Applicants have amended claim 20, thus overcoming the Examiner's objection.

With regard to item 7 and claim 21, the Examiner states:

> (7) Claim 21, line 9, the examiner suggest inserting "**first**" between "**the**" and "**stroke**", and same thing on line 11, between "**scaled**" and "**stroke**" for clarification

Office Action dated February 16, 2007, p. 3.

The Examiner's suggestion has not been adopted. The Applicants have amended the claim, thus overcoming the Examiner's objection.

With regard to item 8 and claim 23, the examiner states:

> (8) Claim 23, line 2, " **a** second stroke" should be changed to "**the** second stroke"

Office Action dated February 16, 2007, p. 3.

The Examiner's suggestion has not been adopted. The Applicants have amended the claim, thus overcoming the Examiner's objection.

## IV. 35 U.S.C. § 101: Claims 8-15 and 21-24

The Examiner rejected claims 8-15 and 21-24 under 35 U.S.C. § 101 as directed towards non-statutory subject matter. The Applicants have appropriately amended claims 8 and 21, thus overcoming the Examiner's rejection. Support for the amendment can be found on page 43 of the specification.

## V. 35 U.S.C. § 102, Asserted Anticipation: Claims 1, 3 and 6

The Examiner rejected claims 1, 3 and 6 under 35 U.S.C. § 102 as anticipated by *Uchiyama*, Character Recognition Method and System, U.S. Patent No. 5,911,005 (June 8, 1999) (hereinafter "*Uchiyama*"). This rejection is respectfully traversed. With regard to claim 1, the Examiner states:

> Uchiyama discloses a method for scaling a handwriting character input as shown in figure 6, the method comprising:
>
> deriving a stroke parameter from a first handwritten character stroke; (column 4, line 29-30), (the examiner interpreted that the feature extraction unit (I 12 in figure 6) extract the vector characteristic which represents the stroke parameter from the inputted image which is the first handwritten stroke)
>
> calculating an input area in which the first handwritten character stroke was supplied; (column 1, line 22-23), (the examiner interpreted that the feature of each sub area as the size of each input area, as the feature was defined as a size on (column 5, line 1 ))
>
> scaling the stroke parameter according to the input area (column 4, line 53-57), (the examiner interpreted that the sub area vector extraction unit (104 in figure 6) is setting the identification value of the vector characteristic which

represents the stroke parameter based on the sub area specification parameters which represents the input area)

Office Action dated February 16, 2007, pp. 4-5.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). In this case each and every feature of the presently claimed invention is not identically shown in the cited reference, arranged as they are in the claims.

Claim 1 as amended is as follows:

> 1. A method for scaling handwritten character input for performing handwriting recognition, the method comprising the computer implemented steps of:
>
> deriving a stroke parameter including a length parameter from a first handwritten character stroke;
>
> calculating an input area in which the first handwritten character stroke was supplied; and
>
> scaling the stroke parameter according to the input area, wherein the scaling comprises multiplying the stroke parameter with a ratio of a reference area to the input area.

*Uchiyama* does not anticipate claim 1 because *Uchiyama* does not teach the either of the claimed features of "deriving a stroke parameter *including a length parameter*" or "scaling the stroke parameter according to the input area, *wherein scaling comprises multiplying the stroke parameter with a ratio of a reference area to the input area.*"

*Uchiyama* teaches dividing an input area into a set number of sub-areas. A character input into the input area is digitized, and a variety of different pixel-patterns are then counted within each sub-area. The counted number of different pixel-patterns is then normalized based on a predetermined feature of the sub-area, such as the width of the sub-area. The normalized pixel-pattern count is then compared to a reference library of similarly normalized reference sub-areas. Thus, *Uchiyama* teaches a comparison based on normalized pixel-pattern counts. Neither the input character nor any stroke length thereof is scaled. Furthermore, because *Uchiyama* only teaches scaling the pixel-pattern count and not a length parameter, the input character of *Uchiyama* is not scaled by multiplying the length parameter by the ratio of a reference area to the input area. *Uchiyama* details this process stating:

Now referring to FIG. 8, the above-described steps 201-206 are diagrammatically summarized. The sub-areas 1-9 are determined by equally dividing the horizontal range between 0 and CHmax and the vertical range between 0 and CVmax. The three equally divided sub-ranges in the y direction are specified by 0, $y_1$, $y_2$ and CHmax. Similarly, the three equally divided sub-ranges in the x direction are specified by 0, $x_1$, $x_2$ and CVmax. These sub-ranges define the sub-areas from which an extraction value is extracted for the use in identifying the image as a whole.

To illustrate the above adjusting process according to the current invention, specific examples are illustrated in FIGS. 2, 5 and 9-11. Referring to FIG. 2, for example, after sub-dividing an image into a predetermined number of sub-areas, in each sub-area or mesh region, five pixels are examined at a time to find a match in the predetermined set of patterns. FIG. 2 illustrates patterns each of which contains a white or off pixel in the center of the five pixels. By scanning in a predetermined direction, a histogram is generated by counting the number of occurrences of each type consisting of the predetermined patterns. For example, type 1 is counted when the center, right, left and top pixels are off while the bottom pixel is on as shown in a pattern 301. For each mesh region $x_i$ (i=1, 2, . . . 9), four types of code 1 through 4 are counted. Although these counts may be strung together to be used as an identification value in the prior art, each of the counted value may be adjusted according to the current invention.

Now referring back to FIGS. 5A and 5B, as described above, the upper right portion as shown in FIG. 5B contains fourteen type 1 patterns (half of which is 301 and the other half 302) and one type 2 pattern 303, as defined in FIG. 2. However, the corresponding portion as shown in FIG. 5D for a handwritten character as shown in FIG. 5C contains eighteen type 1 patterns and one type 2 pattern. The ratio of these identification values (i.e. 18/14) is 1.29, while the difference between the above ratio and the ideal match ratio (i.e. 1.29-1.0) is almost 30%. In order to recognize the handwritten character of FIG. 5C as a reference character of FIG. 5A based upon the above described counts of predetermined pixel patterns, the identification values or the counts must be adjusted accordingly so that the values are substantially similar. When the ratio of the adjusted values is substantially close to 1 or an ideal match value, the two sub-areas or mesh regions are considered to be matched for the purposes of recognition.

To adjust the identification values, a predetermined feature of the sub-area may be used. According to one preferred embodiment, the adjustment is made based upon the width of the sub-regions as shown in FIGS. 5B and 5D. The identification value of the reference character in FIG. 5B is adjusted by dividing it with its width (i.e. 14/12=1.17). Similarly, the identification value of the reference character in FIG. 5D is adjusted by dividing it with its width (i.e. 18/16=1.13). The ratio of these adjusted values (1.13/1.17) is 0.97 and is substantially close to the ideal match value. In this example, since the height of the sub-areas is the same, the height cannot be used to adjust the identification value. However, the sum of the width and the length may be used to adjust the identification value in the above described manner. According to another embodiment, the adjustment is made based upon the length of a diagonal line of

> the sub-area. For example, the square root of $12^2$ and $13^2$ is 17.7 for FIG. 5B while that of $13^2$ and $16^2$ is 20.6.

*Uchiyama*, col. 5, l. 58-col. 6, l. 57.

Nevertheless, the Examiner cites the following section of *Uchiyama* in support of the asserted anticipation:

> Once the image area is subdivided, the sub-area vector extraction unit 104 extracts the vector or the identification value for each sub-area based upon the coordinates or sub-area specification parameters stored in the sub-area coordinate storage unit 107. The extracted vector or identification value of each sub-area is adjusted by the sub-area vector adjusting unit 105.

*Uchiyama*, col. 4, ll. 53-59.

However, this section of *Uchiyama* serves only as an introductory teaching to the more detailed analysis of pixel-pattern count scaling detailed above. Nothing in the cited section discloses the amended features of amended claim 1.

Thus, again, *Uchiyama* does not teach all the features of amended claim 1. *Uchiyama* does not teach the either of the claimed features of "deriving a stroke parameter *including a length parameter*" or "scaling the stroke parameter according to the input area, *wherein scaling comprises multiplying the stroke parameter with a ratio of a reference area to the input area.*" Therefore, *Uchiyama* does not anticipate claim 1. The rejection of claim 1 has therefore been overcome.

Because claims 3 and 6 depend from claim 1, the same distinctions between *Uchiyama* and claim 1 apply to these claims. Consequently, the rejection of claims 3 and 6 has also been overcome.

## VI. 35 U.S.C. § 103, Asserted Obviousness: Claims 2, 7 and 21-22

The Examiner rejected claims 2, 7 and 21-22 under 35 U.S.C. § 103 as obvious over *Uchiyama* in view of *Ito et al.*, Character Input Apparatus/Method and Computer-Readable Storage Medium, U.S. Patent No. 6,694,056 (February 17, 2004) (hereinafter "*Ito*"). This rejection is respectfully traversed. With regard to claim 2, the Examiner states:

> Uchiyama discloses a method, system and program for scaling handwritten character input for performing handwriting recognition, and calculating the input area as above. (The examiner interpreted the recalculating method of the input area of the second stroke input is the same as the first stroke).
>
> However, Uchiyama does not disclose the step of deriving which includes the detecting of the start point and an end point of the first handwritten character stroke as recited in claim 2.
>
> However Ito et al. teaches a method where the step of deriving includes detecting a start point and an end point of the first handwritten character (column

4, line 12-1 6), (The examiner interpreted that the off-stroke information-detecting unit has the same function as the detecting unit of claim 2)

One skilled in the art would have clearly recognized the detecting of the start point of the handwritten character to differentiate them from the end points (column 8, line 43- 45). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Ito et al., where the start point and the end point of handwritten character are detected, in the system of Uchiyama for scaling handwritten character input because such feature is capable of distinguishing characters with similar stroke information and accurately recognizing characters using off-stroke between strokes (column 4, line 28-30)

Office Action dated February 16, 2007, pp. 6-9.

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). To establish a *prima facie* case of obviousness, there must be an apparent reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings in the fashion claimed by the application at issue. *KSR Int'l. Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007). Additionally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka,* 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

In the case at hand, the proposed combination, considered as a whole, does not teach or suggest all of the features of the rejected claims. In particular, the combination, considered as a whole, does not teach or suggest the claimed features of, "deriving a stroke parameter *including a length parameter*" or "scaling the stroke parameter according to the input area, *wherein scaling comprises multiplying the stroke parameter with a ratio of a reference area to the input area,*" which are present in independent claim 1.

*Ito* discloses a handwriting recognition method wherein a stroke order is then assigned to each of the different *handwritten strokes*. By combining the stroke order in the character dictionary with time data from the interval-based character detecting unit, *Ito* makes a determination of which consecutive strokes in the character dictionary constitute a character.

Nothing in *Ito* discloses the deficiencies of *Uchiyama* pointed out above with respect to claim 1. That is, *Ito* does not disclose the either of the claimed features of "deriving a stroke parameter *including a length parameter*" or "scaling the stroke parameter according to the input area, *wherein scaling comprises multiplying the stroke parameter with a ratio of a reference area to the input area.*" Because neither *Ito* nor *Uchiyama* teach or suggest these claimed features, the proposed combination of these references, considered as a whole, does not teach or suggest these claimed features. Therefore, under the standards of

*In re Royka,* no *prima facie* obviousness rejection can be stated against claim 1 or its dependent claims using the combination of *Uchiyama* and *Ito*.

Claims 2 and 7 depend from claim 1, and therefore incorporate all the features of claim 1. By virtue of their dependence from claim 1, the combination of *Uchiyama* and *Ito* does not anticipate claims 2 and 7. Therefore, the rejection of claims 2 and 7 under 35 U.S.C. § 103 has been overcome.

Claim 21 is drawn to an embodiment having features consistent with the features of claim 1. Therefore, the combination of *Uchiyama* and *Ito* does not disclose each feature of claim 21. Claim 22 depends from claim 21, and therefore incorporates all the features of claim 21. By virtue of its dependence from claim 21, the combination of *Uchiyama* and *Ito* does not make obvious claim 22. Therefore, the rejection of claims 21 and 22 under 35 U.S.C. § 103 has been overcome.

## VII. 35 U.S.C. § 103, Asserted Obviousness: Claims 4 and 5

The Examiner rejected claims 4 and 5 under 35 U.S.C. § 103 as obvious over *Uchiyama* in view of *Ilan et al.*, Handwritten Pattern Recognizer with Selective Feature Weighting, U.S. Patent No. 6,023,529 (February 8, 2000) (hereinafter "*Ilan*"). This rejection is respectfully traversed. The Examiner states:

> Uchiyama discloses a method, system and program for scaling handwritten character input for performing handwriting recognition and calculating the input area as in claims 1,2 and 3 above.
>
> However, Uchiyama does not disclose:
>
> 1) The step of deriving which includes calculating the length parameter of the first handwritten character stroke as recited in claim 4, and
>
> 2) The step of calculating includes squaring the length parameter of the first handwritten character stroke as recited in claim 5,
>
> However Ilan et al. teaches a method for calculating a length parameter (column 3, line 6-9) of the first handwritten character, and squaring the length parameter of the first handwritten character (column 6, Formula (10)), (the examiner interpreted that squaring function of the length parameter between the centers of the first two strokes is the same as the squaring function of the length parameter between the start point and the end point of handwritten character)
>
> One skilled in the art would have clearly recognized that the length parameter of handwritten stroke is important in recognition system (column 1, line 65-66), and (column 2, line 1-2) as well as the squaring of the length parameter, which is a mathematical function well known by one of ordinary skilled in art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Ilan et al. where the length parameter is determined as well as the squaring function of the length parameter, which is a mathematical function in the system of Uchiyama for scaling handwritten character input because such feature will improve the recognition system for some parameters which have a range of values, and are not binary in nature (column 2, line 3-6) as well as the usage of the length

parameter in mathematical functions to determine another parameters such as the first parameter in horizontal axis and a second parameter in vertical axis (as shown in formulas (2) and (3), column 5).

Office Action dated February 16, 2007, pp. 9-10.

*Ilan* discloses:

> A handwritten pattern recognition system for recognizing an input pattern is provided. The system has a plurality of parameter determining units, each determining the value of a desired parameter for an input pattern to be recognized. The system also includes a pattern match determiner which produces match values for each parameter of the input pattern with its corresponding parameter of each reference parameter. The match determiner also produces an overall match value for each reference pattern. A pattern classifier selects the reference pattern whose parameter set is "closest", by some matching criterion, to that of the input pattern.

*Ilan*, abstract.

## VII.A. The Proposed Combination Does Not Teach all of the Features of Claims 4 and 5

Claims 4 and 5 both depend from claim 1, and therefore incorporate all the features of claim 1. *Ilan* does not disclose the shown deficiencies of *Uchiyama*, namely "scaling the stroke parameter according to the input area, *the scaling comprising multiplying the stroke parameter with a ratio of a reference area to the input area.*" By virtue of their dependence from claim 1, the combination of *Uchiyama* and *Ilan* does not obviate claims 4 and 5.

Specifically with regard to claim 5, the Examiner states that:

> Ilan et al. teaches a method for calculating a length parameter (column 3, line 6-9) of the first handwritten character, and squaring the length parameter of the first handwritten character (column 6, Formula (10)), (the examiner interpreted that squaring function of the length parameter between the centers of the first two strokes is the same as squaring function of the length parameter between the start point and the end point of the handwritten character).

Office Action dated February 16, 2007, pp. 9-10.

While the Examiner has indeed found a formula in *Ilan* that includes a squaring operation, closer inspection of *Ilan*'s formula (10) shows that this formula serves only to define the distance between two points, namely the distance between the center points of first and second strokes. This formula results in a linear measurement. Applicants' claim 5, on the other hand, squares the length parameter in calculating an input *area* (as defined in base claim 1) – which is not a linear measurement. Thus, claim 5 is not made obvious by *Ilan* because *Ilan*'s formula (10) fails to teach calculating an input *area* including the step of

"squaring the length parameter of the first handwritten character stroke." Therefore, the rejection of claims 4 and 5 under 35 U.S.C. § 103 has been overcome.

**VII.B. The Examiner Used Impermissible Hindsight When Fashioning the Rejection of Claim 5**

With regard to claim 5, the Examiner states:

> One skilled in the art would have clearly recognized that the length parameter of the handwritten stroke is important in recognition system (column 1, line 65-66), and (column 2, line 1-2) as well as the squaring of the length parameter, which is a mathematical function well known by one of ordinary skilled in art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Ilan et al. where the length parameter is determined as well as the squaring function of the length parameter, which is a mathematical function in the system of Uchiyama for scaling handwritten character input because such feature will improve the recognition system for some parameters which have a range of values, and are not binary in nature (column 2, line 3-6) as well as the usage of the length parameter in mathematical functions to determine another parameters such as the first parameter in horizontal axis and a second parameter in vertical axis (as shown in formulas (2) ad (3), column 5).

Office Action dated February 16, 2007, p. 10.

The Examiner failed to state a *prima facie* obviousness rejection because the Examiner used impermissible hindsight when fashioning the rejections. "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." In re Hedges, 228 U.S.P.Q. 685, 687 (Fed. Cir. 1986). Additionally, Personal opinion cannot be substituted for what the prior art teaches because a *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. In re Bell, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). In viewing the references as a whole, one of ordinary skill would look to the problems addressed by the references in determining whether to combine the references.

As shown above, while the Examiner has indeed found a formula in *Ilan* that includes a squaring operation, closer inspection of *Ilan*'s formula (10) shows that this formula serves only to define the distance between two points, namely the distance between the center points of first and second strokes. This formula results in a linear measurement. Applicants' claim 5 on the other hand squares the length parameter in calculating an input *area* (as defined in base claim 1) – which is not a linear measure. Thus, claim 5 is not made obvious by *Ilan* because *Ilan*'s formula (10) fails to teach calculating an input *area* including the step of "squaring the length parameter of the first handwritten character stroke."

Furthermore, the Examiner's statement that a squaring operation "is a mathematical function well known by one of ordinary skilled in art" is out of context and therefore inappropriate for use as a reason to reject the claims as obvious. Claim 5 is not claiming a squaring operation in isolation. Rather, the Applicants claim calculating a character input area which includes the step of squaring the length parameter of the first handwritten character stroke.

The Examiner has clearly "picked and chosen" the center point length determination solely on the basis of an exponent "to the exclusion of other parts" of the reference actually teaching a length, and not an area. This action is a clear example of impermissible hindsight under the standards of *In re Hedges* and *In re Bell*. Therefore, the Examiner has failed to state a *prima facie* obviousness rejection against the claim 5.

## VIII. 35 U.S.C. § 103, Obviousness: Claims 8-15

The Examiner rejected claims 8-15 under 35 U.S.C. § 103 as obvious over *Uchiyama* and *Ito* as applied to claims 2 and 7 above, and further in view of *Ilan*. This rejection is respectfully traversed.

Regarding claim 8, the Examiner states:

> Uchiyama discloses a method and a program (column 4, line 22), (the examiner interpreted a word processors as a program) for scaling handwritten character input for performing handwriting recognition derived from the handwritten character stroke (column 4, line 29-30), also Uchiyama discloses a method and program for calculating an input area and scaling the stroke length parameter as above.
>
> Ito et al. disclose a system (program) where the start point (column 2, line 23) and an end point (column 2, line 24) of the first and second handwritten character stroke are determined (column 2, line 8-9), (the examiner interpreted that each handwriting stroke composing the handwriting characters as the first and second handwriting character) Uchiyama and Ito et al do not disclose the calculation of the stroke length parameter of the first stroke as recited in claim 8.
>
> However, Ilan et al. teaches a method and a program for calculating a length parameter (column 3, line 6-9) of the first handwritten character
>
> One skilled in the art would have clearly recognized that the length parameter of handwritten stroke is important in recognition system (column 1, line 65-66), and (column 2, line 1-2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Ilan et al. where the length parameter is determined in the system of Uchiyama for scaling handwritten character input because such feature will improve the recognition system for some parameters which have a range of values, and are not binary in nature (column 2, line 3-6) as well as the usage of the length parameter in mathematical functions to determine another parameters such as the first parameter in horizontal axis and a second parameter in vertical axis (as shown in formulas (2s) and (3), column 5).

Office Action dated February 16, 2007, pp. 10-15.

Claim 8 has been amended consistent with the amendments to claim 1. As stated above, *Ilan* does not disclose the shown deficiencies of *Uchiyama*, namely "scaling the stroke parameter according to the input area, *the scaling comprising multiplying the stroke parameter with a ratio of a reference area to the input area.*" Therefore, *Uchiyama* in view of *Ilan* does not teach or suggest all of the features of claim 8. The combination of *Uchiyama* and *Ilan* likewise does not obviate claims 9-15 by virtue of their dependence from claim 8. Therefore, the rejection of claims 8-15 under 35 U.S.C. § 103 has been overcome.

## IX. 35 U.S.C. § 103, Obviousness: Claims 16-20 and 23-24

The Examiner rejected claims 16-20 and 23-24 under 35 U.S.C. § 103 as obvious over *Uchiyama* and *Ilan* as applied in claims 1, 4 and 6 above, and further in view of *Ito*. This rejection is respectfully traversed. Regarding claim 16, the Examiner states:

> Uchiyama discloses a system and method (columnl, line 6) for calculating an input area into which the first handwritten character stroke was supplied (column 1, line 22-23), where the calculated stroke parameter is scales according to the calculated input area (column 5, linel 5-16)
>
> Ilan et al. disclose the calculating of the stroke length parameter from the start point and the end point (column 3, line 6-9)
>
> Uchiyama and Ilan et al. do not discloses a system comprising:
>
> a pointing device for receiving a first handwriting character stroke; a memory that contains a set of instructions; and a processing unit, responsive to execution of the set of instructions as recited in claim 16;
>
> However, Ito et at. teaches a system (figure 1 and 2) comprising:
>
> A pointing device for receiving a first handwritten character stroke (204 in figure 2), (column 12, line 13); a memory that contains a set of instructions (column 12, line 7). (the examiner interpreted the memory as the storage medium); and a processor unit (109 in figure 1, column 11, line 64) and (column 12, line 4) responsive to execution of the set of instructions, for determining a start point and an end point of the first handwritten character (column 19, line 47-48)
>
> One skilled in the art would have clearly recognized the data system, which comprises the pointing device (column 12, line 13), memory (column 12, line 7) and a processing unit (column 12, line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system of Ito et al. which comprises a pointing device, memory and a processor unit in the system of Uchiyama for scaling handwritten character because in such feature, it will be possible to have a computer readable storage medium stores programs code that have the computer to execute the function of each, and applies to the handwritten character inputted by the pointing device such as a pen without functions for recognizing the handwritten characters drawn one after another, as well as it will be possible to make the demonstration of the invention in a computer.(column 26, line 61-67).

Office Action dated February 16, 2007, pp. 15-21.

Claim 16 has been amended consistent with the amendments to claim 1. As stated above, the combination of *Uchiyama, Ilan,* and *Ito* does not disclose the claim feature of "scaling the stroke parameter according to the input area, *wherein scaling comprises multiplying the stroke parameter with a ratio of a reference area to the input area*" included in amended claim 16. Therefore, *Uchiyama* in view of *Ilan* and *Ito* does not obviate claim 16. By virtue of their dependence from claim 16, the combination of *Uchiyama* in view of *Ilan* and *Ito* does not obviate claims 17-20. The rejection of claims 16-20 is therefore overcome.

Regarding claims 23 and 24, the Examiner states:

> Uchiyama and Ilan et al. discloses all the subject matter as in claims 16,18 and 20 above. [The examiner interpreted that the method of scaling the second stroke is the same as the rescaling of the first stroke, and the method of recalculating the input area is the same as the previous method for calculating the area.]
>
> Uchiyama and Ilan et al. do not discloses a computer program where the first instructions display the second stroke input in the collection area as recited in claim 23, and the third instructions where the rescaled first stroke and scaled second stroke were displayed in the window as recited in claim 24.
>
> However, Ito et al. teaches a system and program where the rescaled first stroke and the scaled second stroke are displayed in the collection area, therefore in .the window. (203 in figure 2, column 12, line 6), (the examiner interpreted that the displaying method is the same for the stroke parameters as well as the collection area, also the window system is inherent in the system of Ito et al. since he used a computer, and most of computers in the world are running on window operating system)
>
> One skilled in the art would have clearly recognized the display (column 12, line 6) of strokes in the collection area or window. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include the display system of Ito et al. in the scaling handwritten character of Uchiyama because such feature will display all the strokes parameters to the operator on the screen, so he could make any adjustment or changes to the program to improve the handwritten recognition, also the operator may use the colors to distinguish between the handwritten characters on the screen.

Office Action dated February 16, 2007, pp. 20-21.

Claims 23 and 24 have been amended to properly depend from claim 21. The rejection of claim 21 was successfully traversed in an earlier section. Additionally, as shown above with regard to the rejection of claim 21, *Ilan* does not overcome the deficiencies of *Uchiyama* and *Ilan*. By virtue of their dependence from claim 21, the rejection of claims 23-24 under 35 U.S.C. § 103 also has been overcome.

## X. Conclusion

The subject application is patentable over the cited references and should now be in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

/Brandon G. Williams/

Brandon G. Williams
Reg. No. 48,844
Yee & Associates, P.C.
P.O. Box 802333
Dallas, TX 75380
(972) 385-8777
Attorney for Applicants